

The Stern Review & The Paris Agreement

CASSAN Gregory

At the beginning of the new century, the humankind start facing an unexpected global challenge; “the climate change”, also called “the global warming”. It refers to the increasing of the global temperature as a consequence of the greenhouses gases emissions mostly generated by the use of energy.

Our current lifestyle cannot be dissociated from the use of energy. We need it for transportation; as every morning to go to our university or to our work office. We need it also for the manufacturing of our goods and for much more other aspects of our life that we ignore completely. This massive use of energy is increasing everyday also because of the development of countries as China and India. Indeed, in those developing countries, every citizen wants to take part of the economic growth, thus to have it own car, it own mobile phone... In few words, to adopt this lifestyle based on individualism and overabundance of supplies.

While the engines keep spreading gases in the atmosphere, the air get fuller of greenhouse gases and the temperatures increase. Despite those critics, the question is much more about how to create energy without harming the climate than how to live with less energy. In other words, the question is much more about how to create goods and make transportation with less greenhouse gases emissions than how to slow down the global consumption.

- 1. The “*Stern Review on Economics of Climate Change*” was a response on that issue that involves a growing number of governments, civil societies and private sectors all around the world.**

The report was published in 2006 by the British Ministry of Finances. It examines the evidence on the economic impacts of climate change considering the complex policy challenges involved. Thereby, the main innovation of the Stern Review is to introduce economic analysis in the heart of the climate change issue.

The Stern Review is the result of the contribution of forty researchers from different countries such as England, Germany, France, United State of America, and also from developing countries such as China and India. This contribution takes more than one year and a half to be achieved and required many statistic analysis and economic tools, as multiple equation computer-simulation models.

The report was under the direction of Nicholas Stern, on that time Director of the United Kingdom Budget and Public Finances, and advisor of the British Prime Minister of the economy of climate change and development issues. Nicholas Stern held previously the position of Chief Economist and Vice-President of the economic development of the World Bank.

The report was published in October 2006 in the form of 700 pages document. Nowadays, it constitutes the best scientist and economic expertise about climate change. The main success of the review is to bring the economic issue on the climate change debate and also to underline the role of the public policies, to situate them in the front line of that debate.

The message of the report is clear; public policies must fight now against greenhouses gases emissions, otherwise the climate change will cost 5 to 20 times more to the world economy compared with what we should invest now. Furthermore, the report emphasizes the need to create an international consensus to build a collective action.

According to the Stern Review, a diminution of 25% of greenhouse gases emissions in 2050 comparing to nowadays would affect softly the world economy. This optimistic result rely on the statement that public policies has the responsibility to create economic tools to reduce the global cost and to prevent the climate change.

These deep cuts in emissions means a stabilisation at 500-550 parts per million of Carbon dioxide equivalent (ppm CO₂-e). The current level is about 430 ppm CO₂-e, compared with 280 ppm CO₂-e before the Industrial Revolution.

However, achieving these deep cuts in emissions will have a cost. The Review estimates the annual cost of stabilisation at 500-550ppm CO₂-e to be around 1% of GDP by 2050, a level that is significant but manageable according to the Stern Review.

2. The “United Nations Climate change conference in Paris” at the end of the year 2015 was an important opportunity to advance toward those debates.

Indeed, Nicholas Stern emphasizes the need of an early action and the creation of an international collective action.

The Conference was held in Paris from November the 30th to December the 11th 2015. It was the 21st session of the Conference of the Parties (COP 21) to negotiate a global agreement on the reduction of the climate change. The Conference was a success. Indeed, all the 196 countries that attended the conferences had unanimously adopted the Agreement.

However, only one month has passed from the adoption of the Paris Agreement and we are still having a doubt about its effectiveness and the real contain of its body. Does the Paris Agreement mention the relevant points of the Stern Review? Does the Stern Review bring actually the tools to fight against the climate change?

The issue is whether the Stern Review had an impact in the adoption of the Paris Agreement. Furthermore, whether the Paris Agreement introduces an economic analyse of the climate change.

3. The most important target of both Stern Review and the Paris Agreement are identical; to not increase the temperature by more than 2°C above pre-industrial level.

Before the summit to take place in France, the French Government represented by Laurent Fabius, the French minister of foreign affairs, seek for four relevant points. It said that the agreement would be a universal legal agreement applicable to all countries, that this agreement will cover the control and the reduction of emission of greenhouse gases in the atmosphere, that it will include a financial aspect while guaranteeing international solidarity with the most vulnerable countries and that it will be implement accelerators to ensure more ambitious progress.

Nicholas Stern underlined on his side before the summit that the international cooperation through the Paris Conference must be effective. He said that the main target was that global average temperatures will not increase by more than 2°C above pre-industrial level.

This ambitious point was discussed between the delegations of those 196 countries from the first day until the last one of the conference. Finally, on December 11st, the Agreement was adopted and a consensus was made as following.

“Emphasizing (...) aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1,5°C.” (Paris agreement of 2015)

However, it is difficult to say that the Stern Report has a direct impact in that decision process.

4. Other key characteristics of both Stern Report and Paris Agreement are similar; such as the need to build an international collective action as soon as possible.

Indeed, until the beginning if the new century, any agreement has been adopted by a great number of countries that includes the main actors of the international relations. The last agreement on climate change, the Kyoto Protocol adopted in Japan on December 11st 1997, was a failure regarding this aspect.

The Kyoto Protocol has the same target than the Paris Agreement, to reduce greenhouse gases emissions, but India and China has no mandatory targets and the United States of America (USA) never ratified it, USA and China being the two largest national emitters on that time and still today.

On the contrary, the Paris Agreement was a huge success regarding the growing number of countries that are parties in the proceeding. The USA are a good illustration of that changing. President Barack Obama had even insisted on the essential role of his country to play in the Paris Agreement. Moreover, China and India are also parties of the Agreement making the Paris Conference a real collective action. The words of the Agreements reflect that enthusiasm of bringing the all nations on that global challenge;

“Recognizing that climate change (...) requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions”.
(Paris agreement of 2015)

However, the agreement is not binding yet, it will be from the day that 55 countries who produce 55% of the world’s greenhouse gases emissions will ratified the text, and there is still a doubt about the consent of the USA.

“This Agreement shall enter into force on the thirtieth day after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 percent of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession”. (Annex of the Paris Agreement of 2015, Article 21. 1.)

Nicholas Stern describes this text such as a “hybrid agreement, involving a mix of centralised and decentralised, binding and non-binding elements”. He shows how difficult it is to encourage the national governments to adopt effective policies, moreover how hard it is to expose them to the risk of adopting sanctions in case that they will fail to perform.

Besides those common aspects of international public law, other key characteristics of the Stern Review are mentioned in the Paris Agreement. Indeed, the Review states that the action is an urgent challenge, this urgency has a central role in the Stern Review;

“Our actions over the coming few decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and economic depression of the first half of the 20th century”
(Stern Review)

The Paris Agreement refers to that concept of urgency. It makes again the consensus of the conference very predictable for those who agreed and get inspired from the Stern Review. The agreement states;

“Recognizing that climate change represents an urgent and potential irreversible threat to human societies and the planet”. (Paris agreement of 2015)

Finally, some other key characteristics of both review and agreement are similar, such as the need to support the developing countries including through international development assistance, accelerate technological innovation, curbing deforestation, and the removal of barriers to behavioural change.

However, it is difficult to measure the real impact of the Stern Review, some of those statements are very evident to fight against greenhouse gases emissions.

5. Many points of the Stern Review has been ignored in the Paris conference. Two of them are very apparent and show the limits of the impact of the Stern Review in the international negotiations. Those points are the carbon price and the use of renewable energy.

Regarding the first one and according to the report, "Establishing a carbon price, through tax, trading or regulation" is one of the essential elements for the transition to a low-carbon economy.

Nicholas Stern supports his statement through two explanations. The first one seems to involve equity. It says that the creation of a carbon price is a way for those who produce greenhouse gas emissions to pay one part of the consequences of their actions, and to not leave all of it to the future generation.

The second explanation deals with economic efficiency.

“This will lead individual and businesses to switch away from high-carbon goods and services, and to invest in low-carbon alternatives. (...) Emissions reductions will then take place wherever they are cheaper”. (Stern Review)

Despite the fact that this statement looks relevant and evident in a way to fight against greenhouse gases emissions, it was not adopted by the Paris Conference. It shows the limits of the influence of the Stern Review. Indeed, the report seems to be too specific and to involve too much economic aspects regarding the expectation of the conference.

The second key point that Nicholas Stern emphasizes, but was not mentioned in the Paris Agreement, is the use of renewable energy. The use of this kind of energy would accelerate the transition to a low-carbon economy. He considers that hydrocarbons may still make over half of the global energy supply in 2050, the other half being renewable energy and other low-carbon energy sources.

To conclude, we can say that the aim of the Paris Conference was to bring a consensus between the 196 parties and not to be too specific. Indeed, a balance has been made between, in one hand the need of the parties to be part of the agreement, and on the other hand the content of the body of the agreement.

When the draft is too specific, very few states adopt it, because they want to protect themselves. They want to prevent sanctions against them. In other words, and such as one more common aspects of international public law that the Paris Conference did not make exception, more the content of the body is soft, more easily it is to make the countries to adopt it.

6. Great economists did not agreed with the conclusions of the Stern Report. The main critics are about the conceptualization of fundamental notions such as global warming, risk, uncertainty and discounting.

Those critics underline that the model and the cost-benefit analysis such as a result of those conceptualisations are wrong. For example, the critics sais that a ruinous catastrophe cannot be compensated by ordinary saving.

Martin L. Weitzman, Professor in Harvard University, has illustrated his critic, pointing out the Frank Ramsey equation that every economist take into consideration, including Nicholas Stern for his report. This equation says;

“ $r = \delta + \eta g$; where r is the interest rate, δ is the rate of pure time preference, g is the per capita growth rate of consumption, and η is the elasticity of marginal utility or the coefficient of relative risk aversion”.

(A Review of The Stern Review on the Economics of Climate Change, Martin L. Weitzman)

Martin L. Weitzman says that Nicholas Stern used the same interest rate (r) for the cost and benefits for now and for the long term future, and that it cannot be the same. Furthermore, he said that this interest rate (r) cannot be predicted for such long period.

To conclude, we can suggest that economic issues has been discussed only in a superficial way during the Paris Conference, because any report seems to be right, relevant and reliable.